

## **REMARKS**

### **Amendment to the Drawings:**

Applicant has amended Figure 5 as shown in red ink in the attached proposed amendment to the figure. Applicant respectfully requests that the Examiner enter the proposed amendment to the drawings. The changes are intended to more clearly describe the preferred embodiment of the specification.

### **Amendments to the Specification**

Applicant has amended pages 23 and 26 of the specification. No new matter has been introduced by these amendments. With respect to the amendments on page 23, it is presently explained in the second paragraph of page 23 that “the frequencies of the ULO and DLOX signals are selected so that further filtering of the RFX signals is rendered unnecessary. For example, the frequency of the DLOX signals are sufficiently high, and the difference between each DLOX signal and the ULO signal is sufficiently large, so that isolation of the carrier and positive image frequencies is unnecessary.” As those skilled in the art will recognize, Applicant is teaching that the combiner 513 inherently isolates and forwards a selected side-band image of the mixed signal, while filtering out the carrier and positive images. The new sentence added by the amendment herein at the bottom of the second paragraph on page 23 is merely a clarification of this teaching at page 23, lines 15-18 and page 23, lines 27-31, and therefore is not new matter.

Also added by amendment herein is the text within the second paragraph on page 26 of the specification. The second sentence thereto has been added to clarify what is meant by choosing the frequency range of the DLOX signals “to be sufficiently high so that the corresponding RFX signals need not be further filtered prior to combination by the combiner 513” (page 26, lines 25-26). The sentences added at the end of that paragraph have been added to combine the various teaching of the specification in different parts to a single paragraph. In particular, the entire frequency conversion through the transmitter network is detailed to explain that M1-M8 are input to RF transmitter network 411 at 15-57 MHz (page 25, lines 29-30), and where the up-converter stage 520 produces intermediate frequencies at a center frequency of approximately 900 MHz (see page 26, lines 11-24), then pass to down-converter mixers to

produce radio frequency signals having center frequencies in the range of 1-2 GHz, and then are filtered down by a combiner to output frequencies centered between 550-860 MHz (see page 21, lines 19-20).

Last, Applicant points to the extensive and continued use of “up-converter” and “down-converter” throughout the specification and in the claims as evidence that the Applicant possessed and intended to claim a system and method that up-converts the input signal to an intermediate signal, and down-converts the intermediate signal to an output signal.

As can be seen from the above, Applicant believes that the enclosed amendments to the drawings, specification, and claims is fully supported within the specification as filed and therefore do not introduce new matter. As further evidence that Applicant has not introduced new matter by the proposed amendments, Applicant herein presents his own declaration under Section 1.132 attesting to the sufficiency of the disclosure in the specification as originally filed as supporting the arguments for patentability presented in these remarks. Further, the enclosed declaration attests to the sufficiency of the disclosure in the specification as originally filed as explaining the matter presented in the newly-added materials and therefore that such materials are not new matter. Applicant respectfully submits that given the sufficiency of the specification as originally filed as disclosing the invention and as further attested to in the declaration, Applicant respectfully submits that the amendments hereto are not new matter and should be entered. Further, Applicant believes that the amendments to the specification should be allowed as they place the present application in better condition for allowance.

#### **Amendments to the Claims**

Applicant has amended claims 1, 26, and 28. Applicant believes that entering these amendments is proper as they place the application in condition for allowance. Specifically, the claims have been amended to clarify that the down-converter stage in fact outputs signals at a lower frequency than the up-converter stage.

#### **Claim Rejections -- 35 U.S.C. § 103**

In section 2 of the present Office Action, Claims 1-5, 8, 18-30, 32, and 34 have been

rejected under 35 U.S.C. § 103(a) as being unpatentable over *Overton* in view of *Lehman* (“*Lehman*”). That rejection is respectfully traversed and reconsideration of the claims is requested. With respect to exemplary claim 1, therein is recited “an RF combiner that combines the plurality of RF signals into a combined RF signal output at a lower frequency than the plurality of filtered signals.” Such a component is nowhere shown or suggested by *Overton*.

As explained by *Overton* at column 5, lines 1-6, the second up-converter stage uses the RF mixer 28, RF local oscillator 30 and RF transmit filter 32 to up-convert the multi-carrier waveform to a desired RF carrier frequency such as 900 MHz used in standard Global System for Mobile Communications cellular communications. As explained at column 2, lines 32-36, and column 1, lines 9-13, the up-converted signal is transmitted as broadband multi-radio frequency transmission at, for example, the 900 MHz level. *Overton* teaches at column 5, lines 1-15 that the intermediate frequency output from IF filter 26 is up-converted to a higher Radio Frequency (RF) (i.e., 900 MHz) to be transmitted from antenna 40. Therefore, *Overton teaches 2 up-conversions*—from input to output of broadband digital transmitter 10, not the up-conversion and a down-conversion of the present invention.

The preferred embodiment of the present invention describes providing a transmitter within the applicable frequency range for consumer broadcast television. As explained in the preferred embodiment, for example, the second stage of the transmitter produces a “down-conversion” from the radio frequency of 1-2 GHz to an output at 550-860 MHz (see page 21, line19). Therefore, it can be seen that the present invention provides the specified bandpass and carrier frequency conversions by using an “up-converter” stage and a “down-converter” stage to output the processed signals at the applicable frequency ranges. Such a system is not shown or suggested by *Overton*, and therefore, reconsideration of the rejection of claims 1-5, 8, 18-30, 32, and 34 is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Craig Yudel", is written over a horizontal line.

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